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Accident or design? Chambers, cairns and funerary practices in Neolithic western Europe

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Abstract:

The classic image of the Neolithic chambered tomb is of a stone-built – often megalithic – burial chamber covered by a mound or cairn. Many such chambers appear today in a denuded condition, usually as a consequence of natural or human destruction. Controversy has raged since the 19th century as to whether some megalithic chambers may never have had a covering mound, and evidence from sites from Scandinavia to Spain indicates that this may occasionally have been the case. Even where remains of a mound or cairn are present, however, the chamber was often the first structure to have been built, and would for a period have been free standing. At some sites, the deposition of human bodies began at this stage. It is not impossible that the addition of a covering mound was in some cases an act of closure, marking the cessation of burial activity.

Keywords: dolmen, megalithic tomb, burial mound, passage tomb, portal tomb, cairn

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In 1865, a dramatic engraving of the megalithic monument of Pentre Ifan in southwest Wales appeared in the periodical *Archaeologia Cambrensis* (Longueville-Jones 1865) (Fig. 1). It showed a couple on horseback resting under the massive capstone, profiled against the distant backdrop of hazy mountains. The artist had carefully emphasised the delicately propped nature of the stone, resting on the pointed tops of three tapering orthostats that barely seemed capable of supporting its weight.

Seven years later, a similar image was reproduced in *Rude Stone Monuments in All Countries*, written by the architect James Fergusson (1872). Fergusson's book provided one of the first general surveys of megalithic monuments, covering not only western and northern Europe, but also Asia and the Americas. One of his key objectives was to explain why early societies had chosen to construct megalithic monuments using massive blocks of stone. In that context, his comments on Pentre Ifan were especially salient, and bear directly upon the question examined here of chambers and mounds. For, he observed, "men do not raise such masses and poise them on their points for the sake of hiding them again. . . . The mode of architectural expression which these Stone men best understood was the power of mass. At Stonehenge, at Avebury, and everywhere, as here, they sought to give dignity and expression by using the largest blocks they could transport or raise – and they were right; for in spite of their rudeness, they impress us now; but had they buried them in mounds, they neither would have impressed us nor their contemporaries" (Fergusson 1872, 169).

These engravings of Pentre Ifan are typical of the large numbers of paintings and drawings of the late eighteenth and nineteenth centuries that portrayed Neolithic chambered tombs as megalithic skeletons, devoid of any covering of earth or stones. They include paintings by Romantic artists such as Johan Christian Dahl ('Hünengrab nahe Vordingborg im Winter' 1825) and the famous Caspar David Friedrich (for example 'Spaziergang in der Abenddämmerung' c.1837/40). The power of the stones takes centre-stage, set against a dramatic natural background of stormy sky or brooding twilight. This focus on the stones, however, masks an important issue. How many of these structures were ever intended to be visible in that way? Were all of the many chambered tombs – including Dahl and Friedrich's 'hünengräber' – originally covered by mounds or cairns?

In Britain, it was the publication of the first English edition of Worsaae's *Primeval Antiquities of Denmark* in 1849 that appears to have sparked the debate.

Worsaae divided the monuments into two categories: ‘Cromlechs’ (Steendysser) and ‘Giant’s Chambers’ (Jaettestuer). The former he described as “slightly elevated mounds surrounded by a number of upright stones, *on the top of which* are erected chambers formed of large stones placed one upon the other” (Worsaae 1849, 78, my emphasis). The Jaettestuer, by contrast, were “tombs, covered by earth” (Worsaae 1849, 86). The notion that megalithic tombs had been built on top of their mounds most likely arose from the antiquarian belief that they were altars, and the fact that, in their eroded state, many megalithic structures were seen protruding from their mounds. An engraving in Ole Worm’s *Danicorum Monumenoruum Libri Sex* of 1643, showed a rectangular monument defined by a kerb with three mounds within it, a free-standing dolmen perched on top of the middle one (Dehn 2009). A version of the same illustration appeared in *Den Danske Atlas* by Erich Pontoppidan a century later. It was not until more careful inspection in the nineteenth century that it was recognized that chambers such as this had been built at ground level, and that they were indeed enclosed by their mounds, rather than supported upon them (Dehn 2009, 34).

The debate took a similar course in France. In one of the earliest descriptions of the prehistoric monuments of the Morbihan region of southern Brittany, the Abbé Mahé drew a distinction between ‘dolmens’ (megalithic chambers), and ‘barrows’ and ‘galgals’ (earthen mounds and stone cairns) (Mahé 1825, 17-37). That distinction was followed by subsequent writers, such as the Chevalier de Fréminville who distinguished the cairn-covered ‘tombelle’ of Mont Héleu (Er Grah) at Locmariaquer from the exposed ‘dolmen’ of La Table de César (Table des Marchand) (de Fréminville 1834, 23ff). It lived on in the Baron de Bonstetten’s *Essai sur les dolmens* of 1865. He divided ‘dolmens’ into two principal categories: ‘dolmens apparents’ (visible dolmens) and ‘dolmens couverts d’un tumulus en terre ou en cailloux’ (dolmens covered by a mound of earth or stones). Bonstetten argued that ‘dolmens apparents’ were not megalithic structures that had lost their mounds. Furthermore, he held that no process can reasonably be envisaged that would have led to the removal of those mounds if they had originally existed (Bonstetten 1865, 8).

Yet not all French or francophone writers saw matters in these terms. In the 1850s, Alfred Fouquet argued that the exposed or free-standing ‘dolmens’ of the Morbihan were in fact merely the denuded remnants of formerly covered monuments. Take the Gavrinis passage tomb and remove its covering cairn, he suggested, and one

would be left with a 'dolmen' like the Table des Marchands: "more complete and more decorated; but, within several centuries, the weather and human action will assuredly turn it into a simple dolmen" (Fouquet 1853, 6). By the 1870s, this had become the prevailing view and, by 1889, Cartailhac was writing as if the debate were settled, affirming that these monuments were originally "furnished with a covering of pebbles, stones or earth and buried beneath a mound of greater or lesser height." He contrasted this original design with the condition to which many megalithic chambered tombs had ultimately been reduced: "Over time the monument has become degraded and the covering has disappeared. The blocks have been exposed and the chamber, which has been emptied, is itself often ruinous" (Cartailhac 1889, 162).

In Britain, too, the advocates of universal covering mounds eventually won out. William Collings Lukis, for example, took particular exception to Worsaae's contention that the Danish tombs consist of a 'stone chamber . . . perched upon the top of the mound', with the stones exposed. He noted in contrast that the British 'cromlech' is 'enclosed in a mound, and is either planted upon the level of the surrounding earth, or raised a little above it' (Lukis 1864, 146). Lukis attributed the absence of a surviving mound (where that was the case) to processes of natural erosion: "the superincumbent earth will be carried by rain through the interstices of the cap stones and their supports, and in process of time fill up the chamber of the tumulus. The action of the elements will also tend, in course of ages, to carry the earth down the sides of the mound. This will account partly for two facts which are apparent to us now, viz. – the denudation and exposure of many cromlechs, and their being, in some cases, more or less filled with earth or silt" (Lukis 1864, 150). Lukis concluded "that all cromlechs, of whatever form, were originally enclosed in mounds of earth or stone" (Lukis 1864, 150).

Scandinavian prehistorians were unconvinced. Cartailhac drew criticism from no less an authority than Oscar Montelius, who – like Bonstetten – preferred to distinguish a category of free-standing dolmens (*freistehende Dolmen*) from buried or below-ground chambers with entrance passages or entry via a vertical shaft (Montelius 1899, 9). In contrast, in Britain, by the early years of the twentieth century, the arguments advanced by Lukis and others had won general acceptance. Thus in the last (seventh) edition of *Prehistoric Times* (1913), John Lubbock observed: "We may regard a perfect megalithic interment as having consisted of a stone chamber, communicating with the outside by a passage, covered with a mound

of earth, surrounded and supported at the circumference by a circle of stones, and in some cases surmounted by a stone pillar or 'menhir' " (Lubbock 1913, 113).

Allowance was made for occasional exceptions, but the concept of the 'normal' megalithic tomb encased within its mound was firmly established. It remained so through the middle decades of the century. Gordon Childe, in the last edition of the *Dawn of European Civilization*, puts the matter straightforwardly: "Built chamber tombs, when not erected in an artificial excavation, were probably always put underground artificially by burial in a mound or cairn" (Childe 1957, 218).

Within recent decades, however, such a standardised view of the 'classic' chambered tomb has been increasingly questioned. The basis for this re-evaluation is twofold: first, a new and greater emphasis on the uniqueness and diversity of individual monuments; and secondly, new excavations leading to a heightened awareness that Neolithic monuments are often multi-phase structures that reached their final form only through successive stages of addition and modification. Thus it is a combination of theory and field observation that has reopened the question of chambered tombs and their mounds.

There are essentially two questions to consider. 1) Were all megalithic tombs covered by mounds? 2) Was there a single architectural concept that was carried through to completion by the construction of the chamber and the addition of the mound?

Moundless chambers

Let us begin by returning to Pentre Ifan, the megalithic chamber at the heart of the nineteenth century debates. James Fergusson remarked on the complete absence of side-walls. The chamber is open on both sides: supported only by megalithic orthostats at each end. Some archaeologists believe that originally there would have been dry-stone side walls, to complete and close-in the chamber. Yet, if dry-stone side walls had originally existed, no trace of them remained by the nineteenth century, and the remoteness of the location made it unlikely that local farmers had removed the cairn to take material for buildings or field walls (Fergusson 1872, 169-170). It was not until the 1930s that unequivocal evidence for an enclosing cairn or platform was discovered. Excavations in 1936-37 revealed the outline of an elongated structure extending back over 30m from the chamber (Fig. 2). The edges of this cairn had been marked out by smaller upright stones, represented mainly by their empty sockets,

though these extended for only 17m along the eastern and western sides of the cairn, and did not appear to enclose the whole of the structure (Grimes 1948, 15).

These discoveries established the original presence of a structure surrounding the Pentre Ifan chamber but fell short of determining its height and profile. In the 1970s, the idea was revived that portal dolmens (such as Pentre Ifan) had been essentially free-standing (Kinnes 1975, 25). The multi-phase nature of Neolithic monuments was gaining wider recognition: it was suggested that Pentre Ifan had initially been set within a low cairn, and that the tall orthostatic façade and lengthening of the cairn were later additions (Lynch 1972). An alternative view considers the megalithic chamber and façade to be the primary elements, with the whole of the cairn a later addition, and argues that the latter was of relatively low height (Barker 1992, 23-26). The idea that the cairn may have been merely a platform around the base of the chamber is seductive, but hard to substantiate. Other reconstructions adhere to the concept of a more substantial structure, enclosing the chamber although not necessarily concealing the capstone (Turner 1992, fig. 8).

Despite the continuing uncertainty, recent interpretations have largely accepted the proposal that Pentre Ifan and similar sites were not masked by mounds. The massive capstones raised on conspicuously slender pillars have conjured the evocative image of ‘stones that float to the sky’, which led to the suggestion that the purpose of these structures was not to create a closed funerary chamber but to venerate and display the capstones themselves (Whittle 2004). These capstones, at Pentre Ifan and at the neighbouring site of Carreg Samson, may have been earth-fast boulders dug from the very spot on which the chambers were later constructed (Lynch 1975; Richards 2004). Hence the massive capstones that are typical of portal dolmens may have been symbolically powerful in themselves, and the surviving structures might be more than merely their megalithic skeletons exposed by the removal or erosion of cairns. In this class of tomb, such cairns may never have existed.

It must be emphasised, however, that in this respect portal dolmens may have been exceptional among the Neolithic chambered tombs of western Britain. Most megalithic burial chambers of this region were covered by mounds or cairns, and some remain so to this day. The Cotswold-Severn long mounds of south-western England and south Wales, for example, enclosed megalithic chambers. Excavations at Belas Knap in 1929-1930 revealed that the stone-built cairn had had a covering of overlapping slabs laid like roof tiles, and a ridged configuration can be envisaged

(Berry 1929, 1930). A central ridge was also observed at West Tump, Cow Common Long, and Lamborough Banks, and most (if not all) may have been finished with a roof-like structure with central ridge and sloping sides (Corcoran 1969, 78; Darvill 2004, 123). What should be remarked in all these cases, however, is that construction of the chambers preceded the building of the cairn, and the chambers must therefore, for a short period at least, have been free-standing. This is confirmed by the sequence of constructional phases at Hazleton North and Ascott-under-Wychwood (Saville 1990; Benson and Whittle 2007). There is nothing to preclude the possibility that the chambers at these sites were used for burial from the very outset. Thus interment in a free-standing megalithic chamber could have been much more common than we now believe, even though in most cases those chambers were subsequently covered by a mound or cairn.

The absence of an original covering mound has been argued for a number of sites in Britain and Ireland. In Ireland, the Carrowmore tombs are a case in point, surviving as small megalithic chambers surrounded by circular boulder kerbs. There is little evidence that the space between kerb and chamber was ever occupied by a substantial cairn. This argument is particularly clear in the case of recently excavated tombs such as Carrowmore 27 (Fig. 3). The excavator concluded there could never have been a covering mound (Burenhult 1980, 55; 1984, 61). The chamber uprights had been supported by a packing of stones around their base, but there was no evidence that this material had slipped or spread either within or beyond the limits of the boulder ring. The packing stones could have supported at most only a low platform. Earlier references to ‘cairns’ at Carrowmore are either inaccurate, or relate to recent stone clearance from the fields surrounding the sites (Bergh 1995, 79-81).

Of the 180 or so portal tombs in Ireland, 86 have traces of a cairn, and the greater scarcity of cairn remains in areas of fertile soil suggests that, where they are missing, their absence is due to human clearance (Kytmanow 2008, 42-43). In less intensively exploited regions, such as the Burren, the outlines of kerbless cairns have been revealed by excavation and are visible today (Fig. 4). In no cases do the surviving remains of the cairn approach the height of the chamber, and it has been argued that they were most likely low bench-like structures, above which the capstone would always have been visible (Kytmanow 2010, 212). It is possible that the placing of the capstone required the construction of a full-height mound or ramp, up which the massive slabs could be dragged; in which case the low bench-like cairn

could be either the reduced remains of that structure, or an entirely separate construction. The postulated absence of a mound is far from universal, however, even on the Burren, where later megalithic wedge tombs still retain remains of the covering mound resting upon the capstone (Fig. 5)

The passage tombs of Ireland, western Britain and northwest France provide a more complex picture. Most of these appear to have had covering mounds or cairns that entirely enclosed the chamber. In northwest France, many famous megalithic tombs have ample evidence for the existence or former existence of a covering mound. These are not mere dumps of earth and stone. It is now more than a century since Zacharie Le Rouzic noted the presence of concentric internal walls within the cairn that covered the passage tomb of Ile Longue (Le Rouzic 1914), and the internal structure of the Breton passage tomb cairns achieved greater prominence following Pierre-Roland Giot's excavations at Barnenez in the 1950s. When Giot began work at Barnenez, he was struck by the fact that the inner walls were visible high up the mound, standing to a greater height than the outer kerb of the monument. As he explained: "Such structural features had hitherto been considered part of the internal arrangements hidden within the cairns, evidence of phases and techniques of construction, and playing the role of retaining or supporting walls." It was this that led him to propose a stepped mound, and thus was the monument of Barnenez physically reconstructed at the end of his excavations. The published detail does not allow us to go further than this (Giot 1987, 31-32). Reconstruction at several north French passage tombs has subsequently adopted the stepped concept, giving these monuments a very different appearance to that envisaged for most British and Irish sites.

A number of passage tombs are of primarily dry-stone construction and are roofed by corbelled vaults. Their stability depends on the presence of the enclosing cairn, and in these cases the two structures – cairn and chamber – must have been built synchronously (Cavanagh and Laxton 1990; Eogan 1986, 44; O'Kelly 1982, 119-120). Where chambers are megalithic in construction, however, and roofed by capstones, the same imperative does not apply. It is possible that, in at least some of these cases, the passage and chamber were built as free-standing structures, before the mound or cairn was added.

The well-known passage tomb of Bryn Celli Ddu on Anglesey has a particular place in this debate by virtue of the diversity of interpretations that have been placed

on its constructional sequence. Excavations in 1925-1929 revealed that the passage and chamber, together with its oval mound and orthostatic kerb, concealed a series of earlier structures (Hemp 1930). The most significant of these was an annular ditch with an arc or circle of stones on its inner edge. At its centre, immediately behind the chamber, was a pit and, lying flat beside that (though originally upright), was a single decorated block known as the 'pattern stone'. The multi-phase character of the sequence at this site was demonstrated by the fact that the pattern stone and stone circle had been entirely hidden by the mound. Additionally, it was clear that the orthostatic kerb had been built directly on the infill of the annular ditch. O'Kelly argued that a henge (represented by the ditch and stone circle) preceded the passage tomb (O'Kelly 1969). Against this is the absence of a bank outside the ditch, and the likelihood that the digging of the ditch furnished the material for the mound. Hence alternative reconstructions propose a small initial mound enclosing the burial chamber, followed by enlargement to give an oval mound with an orthostatic kerb overlapping the top of the earlier ditch (Eogan 1983; Bradley 1998; Burrow 2010).

Documentary evidence confirms that the cairn, at least in its final form, enclosed the passage and chamber. This is shown by a schematic 1723 engraving that appears to show the mound intact (Rowlands 1723, plate VII), although from a later illustration it can be seen that by 1847 the mound was already badly degraded (Fig. 5). Some of the original mound material still survived on top of the capstone when excavations began in 1925 (Hemp 1930, 221), but it was removed and later replaced by the modern replica mound that covers the chamber today. Recent proposals for a two-phase mound leave open the possibility, however, that the original smaller mound may only have lapped around the base of passage and chamber. Even the initial mound probably buried the 'pattern stone', suggesting an initial mound-free stage that may only have been of short duration. Cremated human remains were found in association with several of the stones in the stone circle: radiocarbon dates suggest that these deposits predate the deposits from the passage and chamber by a short interval (Burrow 2010) though the two may be effectively contemporary. The overall impression is of a relatively rapid transformation from virgin site to stone structures (with human remains) and to mounded tomb. Passage and chamber may have appeared at a fairly early stage in this sequence. They may have remained visible at first, only partially enclosed by the small initial mound, even if some measure of support was essential from the outset to stabilise the shallowly bedded orthostats.

Alternatively, the initial mound may have covered the chamber from the outset, and the expanded mound filled the remainder of the space within the orthostatic kerb later, forming a lower platform (Burrow 2101, 261).

Bryn Celli Ddu provides an excellent example of the complexity underlying ‘finished’ monuments. It also illustrates the difficulty of deciphering constructional sequences even when excavation evidence is available. Above all, however, it draws attention to the changing appearance of the monument through time, and demonstrates that the addition or enlargement of the covering mound was often one of the final acts in a lengthy drama. Indeed, in some cases, it may have been a mark of closure. We shall return to that concept shortly.

An even clearer demonstration of this phenomenon is provided by the tomb of Mound of the Hostages at Tara (O’Sullivan 2005; Scarre 2013). Here the passage tomb is covered by a two-tier structure: an inner cairn of stones, and an outer mound of earth (Fig. 6). The chamber remained accessible and continued to receive new inhumations into the early Bronze Age, at which time individual burials were also inserted into the earthen mound. It is possible that the earthen mound was added only at this period (Fig. 7). The ‘great mound’ at Newgrange may have been added in the late third or early second millennium BC, enclosing and concealing the famous passage tomb and its decorated kerb (Eriksen 2008). It is the beginning of the sequence at Mound of the Hostages that is particularly interesting, however, since behind the orthostats three small stone-slab cists were constructed. These contained cremated human remains that must have been deposited after the erection of the chamber but before the construction of the inner cairn. Radiocarbon dates and the presence of Carrowkeel bowls suggest that the deposits in the cists were contemporary with the initial burials within the chamber. This implies that the chamber at Mound of the Hostages was receiving human burials as a free-standing structure for an indeterminate, but possibly extended, period before the cairn was added. The potential parallels and contrasts with the sequence at Bryn Celli Ddu are striking.

The decoupling of chamber and cairn suggested by the evidence of these British and Irish examples is more than a mere constructional detail: it goes to the very heart of what we consider a megalithic tomb to be. Further examples could be given, not only from Britain and Ireland, but from Iberia, France and Scandinavia, where evidence occasionally demonstrates what may have been the case much more

generally: that megalithic mounds were not only built but also used before the addition of a mound.

Mounds as closure

In some instances, indeed, the mound may have been added as an act of closure. At Tårup in East Jutland, Denmark, excavation was unable to provide definitive evidence that the megalithic chamber had initially been free-standing (Holst 2006, 9). It can nonetheless be suggested that the original structure was only later covered by a turf mound, before being enclosed in the early Bronze Age in a much larger mound (Fig. 8). A similar sequence may apply to Carrowmore tomb 51, which stands apart from the rest of the Carrowmore tombs, both in its position at the centre of the cemetery, and in its morphology. It was the only Carrowmore tomb with remains of a cairn, but a significant interval may have elapsed between the completion of the tomb and the addition of the cairn (Burenhult 2003, 67-68).

A clearer sequence is provided by Tomb 5 in the Forno dos Mouros complex in Galicia (Mañana Borrazás 2005; see also Fábregas & Vilaseco, this volume). This is a relatively large multi-phase monument that has suffered extensive damage: excavation revealed the earliest structure to have been a free-standing megalithic chamber of the seven-stone morphology typical of western Iberia. The chamber had been preceded by a short passage comprised of only two slabs flanking the entrance. Due to the acidity of the soil, nothing survived of the interments that were presumably placed within the chamber, and at the end of its use the passage was carefully blocked by three stone slabs. A ring of medium-sized blocks was then piled against the outside of the chamber, sufficiently heavy to have caused the latter's collapse. It was only after this that a mound of stone soil was added, completely covering the chamber and the blocking material. The excavator was in no doubt that the chamber had been a free-standing structure and was only covered by a mound after it was blocked and taken out of use: "Although in principle the hypothesis can be entertained that this tumulus and chamber constituted a single monumental ensemble, the fact is that the stratigraphic evidence show with complete clarity . . . that the chamber preceded this first mound construction and that it functioned free standing and open" (Mañana Borrazás 2005, 52, author translation). A larger mound was added later, probably associated with a second, larger megalithic chamber (Fig. 10).

It is entirely possible that many of the seven-stone tombs of western Iberia experienced a similar sequence, and that the addition of a mound or cairn was essentially an act of closure. For most of the monuments discussed above, however, the presence of a cairn or mound did not in itself obstruct access to the funerary space. Yet, it may still have marked the memorialisation of a previous burial space, albeit not one that was actively receiving new deposits.

Conclusions

Studies of megalithic tombs frequently consider the burial chamber and its covering mound or cairn to be the product of a single unified design. This is challenged by evidence from recent excavations demonstrating that many, if not most, of these monuments were multi-phase constructions, the result of successive modifications and additions.

There is hence an inherent tension between the tomb as finished product, and the multiple stages by which that product was achieved. To regard these structures as the intended culmination of a constructional sequence fails to account adequately for the dynamic character of their creation. Since the nineteenth century, the contention that all such tombs were once covered by mounds has been opposed by the view that some were built as free-standing monuments.

For certain categories of tomb, the simultaneous construction of chamber and cairn would have been essential for their structural integrity. The remainder, however, will inevitably have passed through an initial mound-free stage during the process of construction. Furthermore, chambers did not always wait for mounds to be added before being used for burial deposition.

This interpretation has been proposed for a number of Scandinavian megalithic tombs, such as Trollasten in Scania, Kjallesten on Lolland, Gunderslevholm on Zealand, and Tustrup in Jutland (Eriksen and Andersen, this volume). At Lønt, in Jutland, it has been argued that the megalithic chambers must have remained as free-standing monuments for some appreciable time before the mounds were constructed (Gebauer, this volume). This view has not gone uncontested, however, and the alternative view – that apparently free-standing or ‘open’ dolmens are merely the weathered and denuded remains of once mound-covered structures – has been closely argued for some of these sites (Dehn 2013). What is important here, above all, is that the issue is considered carefully on a site by

site basis, free from prior assumptions that mounds were (or were not) a consistent feature of megalithic chambered tombs.

Rather than marking the structure as ready for use, the addition of the mound might sometimes have essentially been an act of closure. At a number of sites, funerary activity can be shown to have begun before the chamber was erected. In these cases, the erection of the megalithic chamber may mark only the formalisation of pre-existing mortuary activity at that location. This analysis underlines the importance of disentangling construction, funerary activity, and final form as separate (if interwoven) elements, rather than parts of a single project design.

Two key conclusions arise from this brief review. The first is the importance of *sequence*: that in monuments where a chamber is covered by a mound, the chamber may have operated for a significant period before the mound or cairn was added. It is generally difficult to determine the length of that period, but free-standing chambers may have been much more common than conventional wisdom suggests. There will have been exceptions, notably in the case of corbel-vaulted burial chambers where parallel construction of the chamber and cairn would have been essential to ensure the stability of the covering. In other cases, however, the building of a mound or cairn may have been the final stage in a multi-phase sequence of construction, use and abandonment.

In second place we must recognise how difficult it is to reconstruct the original three-dimensionality of these monuments. Nineteenth century antiquarians were sometimes misled by the appearance of the surviving megalithic structures, and overlooked issues of natural degradation and human interference. Absence of a visible mound does not necessarily indicate that one never existed. Furthermore, at many well-known sites the covering mound still survives, such as West Kennet in Wiltshire, Gavrinis in Brittany, and Newgrange in Ireland. In the majority of cases, however, excavation may discover the base of a cairn-like structure, but that discovery does not resolve the question of its original character. Was it merely a bench or platform, or did it rise above the capstones? Careful observation can sometimes determine the issue, but not in all cases. What emerges is the diversity of forms encountered amongst the Neolithic monuments of northwest Europe, and the realisation that structures that look very similar in their current denuded state, or from the published plan, could have been strikingly different in concept and appearance.

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Illustrations

- Figure 1. The portal dolmen of Pentre Ifan in southwest Wales: engraving from *Archaeologia Cambrensis* (1865).
- Figure 2. Pentre Ifan: plan of the monument showing the cairn footings revealed in 1936-1937 (after Grimes 1948).
- Figure 3. Photo mosaic of excavations at Carrowmore tomb 27 (from Burenhult 1980).
- Figure 4. Irish portal tomb of Poul nabrone on the Burren (County Clare). Excavations in the 1980s revealed traces of a small oval kerbless cairn, but it is unlikely that this would ever have covered the capstone (Photo: Chris Scarre).
- Figure 5. Irish wedge tomb of Parknabinnia on the Burren (County Clare). Note the capstone still carries remains of the original covering mound (Photo: Chris Scarre).

Figure 6. Bryn Celli Ddu, passage tomb on the island of Anglesey (North Wales): nineteenth century engraving showing remains of the cairn still surviving on top of the capstone: engraving from *Archaeologia Cambrensis* (1847).

Figure 7. Mound of the Hostages at Tara (Co. Meath, Ireland) (after O’Sullivan 2005).

Figure 8. Constructional sequence at Mound of the Hostages, Tara: the earthen mound covering the stone cairn contained a number of early Bronze Age burials and may only have been added at that stage.

Figure 9. Plan of the megalithic tomb at Tårup in East Jutland. The initial dolmen was probably built in the later fourth millennium. The chamber may initially have been free standing within a boulder circle enclosing a paved ceremonial area. A cairn was subsequently added, then a turf mound 15m in diameter, and finally a 57m mound with encircling ditch in the second millennium BC (after Holst 2006).

Figure 10. Constructional sequence at Forno dos Mouros (Galicia). The initial hexagonal chamber was initially free-standing, and closed with blocking slabs across the entrance, before a covering mound was built. A larger mound with a possible second chamber was later added (from Mañana Borrazás 2005, 52).